Another issue with an individual-responsibility ICL is how to ensure repayment of the loan if borrowers die or become disabled. In the case of conventional loans made by private lenders (such as for a home mortgage), lenders sometimes require borrowers to buy insurance covering death and disability, with the lender as the beneficiary. A similar requirement could be associated with this type of ICL.

Externally Subsidized Loans. A second type of ICL involves the federal government providing subsidies to students, but borrowers with higher incomes not subsidizing those with lower incomes. This type of externally subsidized ICL could resemble a direct Stafford loan with income-contingent repayments. Federal subsidies to borrowers might consist of paying interest on the loans while borrowers were in school as well as during specified periods of deferment. The government (that is, taxpayers) could also remain responsible for losses through defaults and could pay administrative costs. All borrowers would, however, be responsible for repaying their own debt after leaving school, and they might also be required to buy insurance against low incomes that would not allow them to repay their loans.

Compared with the individual-responsibility type of ICL, terms on an externally subsidized loan could be more generous. If borrowers did not accumulate debt from unpaid interest while they were in school (because the federal government paid the interest costs for them), for example, cumulative loan amounts could be increased with no corresponding increase in payback rates or in the length of time that borrowers would need to repay their loans. The federal government could also provide explicit subsidies by charging borrowers an interest rate lower than the one it must pay for its funds, which would allow loan limits to be raised without changing other terms of the loan.

Internally Subsidized Loans. A third type of income-contingent loan is the internally subsidized model, in which the terms are set so that borrowers who have high incomes during their repayment period share responsibility for repaying the loans of borrowers who have low incomes during that period. This model assumes that, although some borrowers would not earn adequate income to repay their loans, enough other borrowers would receive sufficiently high incomes to subsidize people who could not repay.

Although borrowers would subsidize each other, this type of incomecontingent loan program would be designed to pay for itself over the long run. Unlike the case of an externally subsidized ICL, the federal government would provide no subsidies for borrowers. Rather, the total amount lent to a given group of students would be repaid (in net present-value terms) over the period of repayment. Groups of borrowers could, however, be defined in several ways: in terms of those who borrowed in a given year (so that each annual

cohort of borrowers paid for itself) or in terms of a group of cohorts of borrowers (so that borrowers in some cohorts collectively subsidized those in others).

Internally subsidized ICLs would permit borrowers to obtain larger loans than they could with individual-responsibility ICLs. Unlike the latter, whose maximum cumulative loan amount would have to be relatively low so that all borrowers could reasonably expect to repay their loans on time, under an internally subsidized ICL program, all borrowers would not be expected to repay their loans fully. The only requirement for the internally subsidized ICL to be self-financing would be for the group of borrowers (however defined) collectively to repay the total amount it borrowed.

Because all borrowers would not be expected to repay their loans fully, some would have to repay more than their loan amounts (in net present-value terms). One way to accomplish that would be to charge borrowers a higher interest rate, as private lenders do in many conventional loans. Although not usually looked at this way, in many conventional loans, people who repay their loans in effect subsidize people who do not. Defaulters are implicitly subsidized through the interest rate, which lenders set to reflect (in part) the risk of nonrepayment among people to whom they lend. In an internally subsidized ICL, the interest rate would have to be set above, for example, the rate that would be necessary in an individual-responsibility ICL in order to achieve the same rate of return on the total amount lent. The exact interest rate would depend on the proportion of money borrowed that would not be repaid. Estimating that share could be difficult, however.

An alternative way to have borrowers with high incomes subsidize those with low incomes would be to require all borrowers to continue paying for their loans for a stipulated minimum period. Without this feature, borrowers earning higher incomes would repay their loan obligations and exit the program before reaching the maximum length of repayment. Those with insufficient incomes to repay their loans would stay in the program the maximum length of time.

Yet another way to ensure cross-subsidizing would be to require borrowers who repay their loans before a specified period of time to pay an "exit fee," or surcharge. The surcharge would be used to subsidize the loans of people who never exit from the program and thus fail to repay fully.

Some conventional loan programs require borrowers to purchase insurance against nonpayment and would not be included in this discussion.

The effect of requiring all borrowers to make payments for a given period of time or to pay an early-exit fee would be that borrowers would pay a different implied interest rate on their loans depending on their income profile. Borrowers with high incomes would pay higher implicit interest rates, thus indirectly subsidizing borrowers without enough income to repay their loans in the allotted time--who, in effect, would have lower (or even negative) rates of interest on their loans.<sup>12</sup>

Setting a minimum repayment period for all borrowers or an appropriate early-exit fee would require estimating the proportion of total funds that would not be repaid. Having the exit surcharge vary with the length of time spent repaying would require estimating how long it would take borrowers to repay their loans as well.

The cross-subsidies in an internally subsidized ICL program raise the concern about adverse selection discussed earlier. Requiring some borrowers to subsidize others could affect the kinds of borrowers who enter the program, which could undermine the financial stability of this type of ICL.

<u>Doubly Subsidized Loans</u>. The last type of ICL, a doubly subsidized loan, includes both internal and external subsidies. Limited only by the amount of subsidy available, this type of ICL could be the most generous of the four to borrowers in terms of the cumulative amount they could borrow, their payback rate relative to income, the length of their repayment period, and the interest rate they were charged. To finance these terms, borrowers with high incomes during the required repayment period would repay more than those with low incomes, and the federal government would provide all borrowers--or perhaps just those with relatively low incomes--with additional subsidies, possibly in the same ways as in the Federal Stafford Loan Program.

A doubly subsidized ICL would require a trade-off between the amount of subsidy from the federal government and the amount provided by high-income borrowers. For any given set of loan terms, the larger the subsidy provided by some borrowers, the smaller the subsidy that the federal government would need to pay to ensure that the program balanced its accounts at the budgeted rate of return. Requiring borrowers with higher incomes to repay relatively more of their loans than those with lower incomes, however, again raises the issue of whether such borrowers would enter the program or attempt to alter their behavior to affect their incomes.

<sup>12.</sup> See Robert W. Hartman, "Equity Implications of State Tuition Policy and Student Loans," in Theodore W. Schultz, ed., *Investment in Education* (Chicago: University of Chicago Press, 1972).

# WOULD BORROWERS ALTER THEIR BEHAVIOR IN RESPONSE TO THE TERMS OF AN ICL?

In designing an income-contingent loan program, policymakers need to be alert to the possibility that, in response to the incentives implicit in the terms of the loan, borrowers would change their behavior in ways that would affect their ability or willingness to repay. Income-contingent loans could alter the behavior of borrowers in two fundamental ways. First, ICLs could provide the means for additional students to enroll in college. (This response is one of the motivations for having ICLs.) But second, the loans would set up incentives that could change who borrows and what they do after they leave school-specifically, their participation in the labor force, the kind of work they perform, the amount they earn, and how they report their income.<sup>13</sup>

Although some advocates argue that one of the reasons for having ICLs is to reduce the pressure on students to choose jobs in which they will earn enough money to repay their loans, significant changes in the behavior of borrowers could also affect the financial stability of an ICL program. If the projected income profiles of borrowers were wrong--either because the behavior of borrowers changed in response to the terms of the loan, or for any other reason--the costs of an ICL program would be different than expected. For example, a program that was not expected to require subsidies from the federal government could need large subsidies to remain viable if the projected incomes of borrowers were not realized during the repayment period.

The proportion of a borrower's income that would be used to pay back the loan could have effects similar to taxes, which are known to change people's behavior. The question with respect to an ICL program is how the payback rate and associated terms of the loan would affect the income received and reported by borrowers.

Three possible behavioral responses by borrowers are of greatest concern. The first involves adverse selection. As described earlier, adverse selection would occur if people most likely to earn high incomes--and thus to repay the most on an ICL--were less willing to take on an ICL to begin with, while those most likely to earn low incomes and potentially profit from an ICL were more willing to do so. A key issue is the extent to which borrowers are able to forecast their future income profiles accurately. Researchers have found that a significant fraction of high earners are able to predict their future earnings. Using such characteristics of students as family socioeconomic status, race, sex, religion, and achievement test scores, one study was able to identify

<sup>13.</sup> See Robert W. Hartman, "Financing the Opportunity to Enter the 'Educated Labor Market'," in Margaret S. Gordon, ed., *Higher Education and the Labor Market* (New York: McGraw-Hill, 1974).

40 percent of those at or above the 90th percentile in the earnings distribution. The authors counsel that highly successful students are even better than researchers at predicting their own incomes because of their self-knowledge (for example, of their own motivations).<sup>14</sup> This suggests that adverse selection of borrowers is an important concern in designing an ICL program.

A second possible behavioral effect of the terms of an ICL concerns the borrower's decision to work. Having to repay an income-contingent loan in effect raises the marginal tax rate that a worker faces. Increases in marginal tax rates reduce the after-tax reward from work, which in some cases may reduce participation in the labor force.

The impact of increased marginal tax rates on income because of the ICL payback rate would probably be greatest on two groups of borrowers: married women and people with high incomes. A general concern exists about the consequences of ICLs for women, who usually earn less than men with similar levels of education but who borrow about the same amount. Their lower earnings suggest that fewer women might fully repay their loans even without behavioral changes induced by increased marginal taxes. If that were to happen, men would end up subsidizing them. In addition, research has found that married women are responsive to changes in the marginal tax rate on joint income, which raises the possibility that relatively more married women would choose not to work, or would work fewer hours, because of an ICL. This finding also raises questions about the impact of married women's choices on the participation of their husbands in the labor force and the extent to which husbands would repay their own loans if they also had to contribute to repaying their wives' ICLs.

People with high incomes also seem to be especially sensitive to changes in marginal tax rates on reported income. If the addition of an ICL payback rate were to alter the behavior of such individuals (for example, by causing them to work fewer hours), it could reduce the extent to which relatively high-income borrowers would repay more than they borrowed (and even affect the amount of federal, state, and local taxes they would pay). Fewer funds would then be available to subsidize those who earned relatively low incomes.

<sup>14.</sup> See Krueger and Bowen, "Income-Contingent College Loans."

<sup>15.</sup> The effect of the ICL payback rate on the behavior of married women would vary depending on whether individual or joint (family) income was used in calculating repayments due (see page 21).

A third concern with respect to an ICL's repayment terms involves the phenomenon known as moral hazard. This occurs when insurance policies established to remedy unlikely negative events make them more likely to happen. In effect, ICLs would provide insurance against having loan payments constitute a relatively high share of income after attending postsecondary school. The moral hazard is that ICLs could foster relatively lower incomes among borrowers, who would know that they were protected from default on their student loans because their repayment amounts would be contingent on their incomes. Some advocates of ICLs argue, however, that it is an advantage of ICLs that they allow borrowers to enter and stay in lower-paying jobs, many of which are in the public sector, without having to worry as much about being able to repay their student loans.

The relative importance of these three concerns depends on the terms of an ICL. Since all income-contingent loans involve a payback rate, all three concerns are relevant to a degree. But generally, the greater the extent to which an ICL relies on cross-subsidies from higher-income borrowers to lower-income ones--as in the internally subsidized and doubly subsidized models--the more likely borrowers are to change their behavior. This follows because such ICLs would impose a larger burden and responsibility on higher-income borrowers, who thus would have more to gain by altering their behavior. In addition, the larger the external subsidies to an ICL program (such as from the federal government), the less likely borrowers would be to change their behavior after leaving school. This result would occur because external subsidies would allow loan terms less onerous to borrowers and would thus be less likely to provoke changes in behavior to avoid them.

The availability of other sources of funding for postsecondary schooling would also affect the degree of adverse selection in the loan program. For example, if other loans with conventional terms continued to be available, an ICL program would be more likely to attract students who expected to receive relatively low incomes and less likely to appeal to those who would earn relatively high incomes (other things being similar). But other sources of funds for college would also be relevant, including money from parents (and other relatives), earnings from work, and even educational awards received through the new federal program of national service.

See Robert W. Hartman, Credit for College: Public Policy for Student Loans (New York: McGraw-Hill, 1971).

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## WHAT OTHER FACTORS WOULD AFFECT THE TERMS OF AN ICL?

Specifying the terms of an income-contingent loan involves a number of other critical decisions. These decisions--about the cumulative loan amount, the length of the repayment period, the payback rate relative to income, and the interest rate charged to borrowers--would have consequences for the trade-offs that exist among an ICL's terms. Altering one term usually would require adjusting one or more other terms if the ICL program were to remain financially stable. The administrative burden placed on borrowers and lenders also might be a factor in how successfully the program operated.

### Cumulative Loan Amount

Determining the maximum cumulative loan amount--as opposed to the annual loan limit--means addressing a number of concerns. These concerns apply to any student loan program, not just those with income-contingent repayment plans. Moreover, since an ICL program would probably be only one part of a larger system of student aid, attention must be paid to the amount of other aid (especially grants) available to borrowers.

In setting both the cumulative and annual loan limits, perhaps the most important consideration involves how much money student borrowers would need to meet the costs of attending college. (Costs include tuition and fees, room and board, and ancillary expenses such as books and transportation.) Annual costs of attendance vary by type of institution--with private, nonprofit colleges being most expensive, followed by career colleges (for-profit proprietary schools offering vocational and business programs) and public institutions (including both four-year and two-year colleges). Because of these differences, policymakers would need to decide how much of each type of cost should be covered by an ICL, both annually and cumulatively. They might also set different loan limits for undergraduate and graduate students, and possibly for students in different types of programs. ICLs could also be restricted to students attending school full time and continuing to make satisfactory progress.

Some proponents of ICLs argue that the cumulative loan limit should be high enough to ensure students' ability to enroll in the school of their choice. But setting the limit too high could have other consequences. For instance, if students were able to finance their entire education through income-contingent loans, they might find that their parents were less willing to help them pay for college. The current system for awarding aid to students under 24 years of age who have never been financially independent of their parents (so-called

dependent students) in effect requires parents to make a contribution toward meeting their child's cost of attending school as a condition for receiving aid. If sufficient funds were available (from either a conventional or incomecontingent loan program) for students to pay for college without a required contribution from their parents, parents might feel less compelled to offer financial support.

Another unintended consequence of setting high cumulative loan limits is that the availability of large loans could allow postsecondary institutions to increase their prices and encourage would-be students to borrow the amounts needed to enroll. Some analysts argue that the expanded availability of student loans in the late 1970s and early 1980s helped spur the rising costs of attendance at many colleges. Both price increases by schools and reductions in support by parents would undercut a main goal of an ICL program--to facilitate financing a college education.

Large amounts of borrowing by older students could also be problematic--either for the students or for the financial viability of the ICL program. Because "lifelong learning" is being widely encouraged in our society, a substantial number of older students could become interested in borrowing. Older students would probably spend a shorter period in the work force after their schooling and thus would have less opportunity to repay their loans. Stricter repayment conditions for older students (such as higher repayment rates) could make loan repayment difficult for them, but applying the usual repayment conditions could result in substantial unpaid loans. The solution might need to be reduced loan limits for these students.

A final consideration in setting a cumulative loan limit, at least for a self-financing ICL, involves the amount of time a borrower spends in school. Unless students received subsidies for the interest on their loans while they were in school, the amounts of the loans would increase on a compound basis during that period. This growth in the outstanding loan balance--called negative amortization--could result in students owing substantially more than they borrowed if they were enrolled for many years. Besides placing an unexpected burden on students, such an outcome could increase the amount of unpaid loans that an external source--the federal government--would become responsible for.

## Length of Repayment Period

Several factors bear on the length of time that borrowers would have to repay their loans. As in the case of setting the cumulative amount of debt to be

allowed, the age of the borrower--or the likely number of future years in the labor force--would be a major consideration.

The maximum time that most borrowers spend in the labor force after college is about 45 years. On the one hand, requiring borrowers to repay their loans over this entire period could become a consideration in their choosing whether to get married, have children, purchase a house, help pay the costs of college for their children, or save for retirement. On the other hand, requiring repayment over a shorter period (say, 15 to 20 years) would limit the amount that students could borrow, especially those in graduate and professional programs.

Given the interdependent nature of the terms of an ICL, determining the length of repayment needs to be considered in the context of the other terms. For example, the length of time to repay a loan could be made contingent on the cumulative amount of debt incurred or on the level of education completed. Many borrowers have relatively low cumulative debt and probably could repay in the 10-year period that is standard in the current federal guaranteed loan programs, but those with high debt would probably need more time. Although such adjustments would reduce the simplicity of administering an ICL program, they could provide additional flexibility to certain types of borrowers.

## Payback Rate Relative to Income

The payback rate is especially important to the financial stability of an ICL program because its effects would resemble those of an income tax. Research suggests that changes in marginal tax rates on income could affect the behavior of individuals (especially married women and people with high earnings, as discussed earlier) and that a high payback rate could adversely affect the financial stability of an ICL program.

The payback rate necessary to make an ICL program financially stable-assuming no changes in reported income in response to changes in that rate-would depend on several factors. The most basic is the definition of income used. The broader the definition, the lower the payback rates could be. But broadening or narrowing the definition raises a number of issues.

Some advocates of income-contingent loans have argued for using the incremental income earned as a result of postsecondary education as the amount that should be subject to a payback rate.<sup>17</sup> Unfortunately, deter-

<sup>17.</sup> See Vickrey, "A Proposal for Student Loans."

mining that amount is difficult and subject to considerable uncertainty. Many borrowers might be unwilling to believe statistically based estimates of what share of their income results from their having attended college. Consequently, this approach would probably be unlikely to find acceptance.

The most straightforward way to define an appropriate income base on which to apply a payback rate would be to use existing definitions in the Internal Revenue Code. Doing so would still leave policymakers with a number of choices, however, such as whether to include unearned as well as earned income in the definition of taxable income. (Unearned income includes interest, rents, and profits; earned income comprises wages and salaries.) On the one hand, the philosophy behind using the incremental income attributable to college education would suggest using only earned income. On the other hand, fiscal prudence and a belief that individuals should pay what they are able to afford would suggest using both types of income. Some borrowers have discretion over the kind of income they report, so not including unearned income in the "taxable" base could result in some borrowers' changing their behavior to realize their income as unearned.

Another important issue concerns whether only an individual's income would be considered in calculating loan repayments or, if that person is married, whether the spouse's income would also be considered. Counting both could discourage someone from marrying a person with large ICLs, while not counting a spouse's income could reduce the probability of repayment for a significant fraction of borrowers--especially women who might choose not to work outside the home after marriage.

Yet another issue involves defining a possible floor of income below which there would be no expectation of repayment. Such a floor would set some minimum amount of income for basic needs before requiring student loan repayments. An income cutoff could be set in a fashion similar to that of the poverty thresholds, for example, by taking family size into account. The higher the floor, of course, the less income that would be subject to a payback rate. A floor could also affect the extent of labor force participation by borrowers since it would create an incentive not to earn more than a certain amount of income. An alternative approach to setting a minimum income level would be to allow deductions for such factors as the number of dependents, business expenses, health expenditures, and so on. This approach would, however, add to the administrative complexity of the ICL program.

Concern about adverse selection could also lead policymakers to set a maximum amount of income that would be considered in calculating payback amounts. Setting a maximum income level would assure those earning incomes over the ceiling that not all their gains from college education would be subject

to the ICL payback "tax." Such a ceiling could, however, reduce the amounts repaid or increase the time needed to repay by people with highly variable incomes.

Besides issues concerning the definition of income, several other factors are relevant to setting payback rates. One is whether such rates should be constant or should increase or decline with the level of income. Some policymakers may prefer to have repayment rates rise with total income since discretionary income also increases then, but others may prefer to have rates decline with income to minimize the distortionary effects of payback rates on behavior. The latter concern could be examined in the context of other federal, state, and local income taxes to assess the effects of the various possibilities on the marginal tax rates of borrowers at different income levels, and hence on the likelihood that the behavior of borrowers would change. Broadly speaking, federal taxes are progressive, while state and local taxes are regressive, but substantial variability exists across the country.

A related issue is whether to vary payback rates according to other characteristics of the borrower, such as his or her total amount of debt. Those borrowers who assume more debt could be required to use higher payback rates. An advantage of this approach is that it would create an incentive for students to consider carefully the amount of loans they take out to pay for their education. A disadvantage is that it could discourage some students from borrowing money to continue their education.

Another factor in setting payback rates could be the age of the borrower or the number of years that he or she would be likely to remain in the labor force. An advantage of considering either characteristic would be to allow payback rates to fall proportionately with increases in the expected period of time a borrower would have income with which to repay. A disadvantage is that higher rates associated with increasing age or with reduced time in the labor force could discourage older individuals from taking out loans to refine, renew, or acquire additional skills in postsecondary institutions that could help them in the labor market.

#### Interest Rate

The interest rate charged to borrowers has a central role in determining the extent to which an ICL would be externally subsidized--and thus the amount of the federal subsidy. The interest rate also would have a primary role in determining the attractiveness of an ICL to borrowers.

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Arguments exist for setting the interest rate on federal student loans (conventional as well as income-contingent) at various levels. These levels range from zero to a rate that approaches what the private market would charge if payment based on income could be guaranteed (as, for example, some analysts believe it nearly would be if repayments were collected through the Internal Revenue Service). Advocates of low rates believe more people need to be encouraged to enroll in college. Those suggesting the use of high rates believe greater efficiency in using scarce capital and other limited resources (including college facilities) would be fostered by charging rates that more closely approximate the actual cost of the funds to the economy.

Private lenders charge interest rates that reflect their cost of funds, the risk of nonrepayment among their borrowers, and the cost of administering their loan programs. A federal income-contingent loan program that did not similarly cover these costs would have to be subsidized by the government, implicitly or explicitly.

Since the federal government can borrow funds more cheaply than private lenders can, it could offer student loans at rates lower than those private lenders can afford without needing budgeted federal subsidies. To the extent that the federal government did so, it would be implicitly providing borrowers with a subsidy relative to the charges they would face in the private market. As a consequence, the federal government would also be diverting the capital from areas with higher rates of return than would have occurred if the private market allocated it. Charging borrowers less in interest than the federal government itself has to pay would require an explicitly budgeted subsidy.

To avoid having to pay an explicit subsidy, the federal government would need to charge borrowers an interest rate high enough to cover the costs of operating the program and of losses from nonpayment of loans. Nonpayment of an ICL could stem from inadequate income (possibly as a result of a disability), refusal to pay (possibly through tax avoidance), emigration to certain countries, or death. Designing a financially stable program would require accurately determining the probability of nonpayment from these and other sources so that the costs could be factored into the interest rate that borrowers would have to pay.

Estimating administrative costs could prove challenging. These costs would vary depending on whether ICLs were provided directly (through postsecondary institutions) or indirectly (through private lenders) and on whether the Internal Revenue Service (IRS), the Department of Education, or private agencies serviced the loans. The 1993 changes to the Higher Education Act reduced the federal subsidies that are paid to lenders and guaranty agencies primarily to cover their administrative costs. Some analysts suggest

that administrative costs would be lower for an ICL program originated through postsecondary institutions and serviced by the IRS. Others believe that the administrative costs for an ICL program would be higher because additional communication would be required with borrowers on a regular basis to establish their income and, if necessary, recalculate their monthly payment and inform them of the new amount.

Policymakers might also want to consider other objectives in setting the interest rate of an ICL. For example, rates might be higher if an ICL were to provide internal cross-subsidies for borrowers with low incomes. High rates could, however, foster adverse selection. Interest rates could also be set lower when borrowers are in school and not earning income, but borrowers would still be expected to pay the interest charges or to capitalize the charges into their total debt if they did not pay them until after leaving school. To contain the risk of indebtedness that students would face, some analysts also advocate capping the rate of interest that students would be required to pay but allowing rates below that cap to vary with changes in the economy.

### Administrative Burden on the Borrower

A final factor to consider in designing an income-contingent loan program is the administrative burden it would place on the borrower. (The difficulty faced by the lender is reflected in the costs of administration considered above.) Any ICL program would be relatively cumbersome to borrowers compared with a conventional loan program, such as the current federal guaranteed student loan programs, because it would place additional responsibilities on borrowers. Borrowers (or their agents, such as employers) would have to inform their loan servicers of any change in their income so that their monthly payment could be recalculated. A reliable way to collect valid income data would be essential to the financial stability of an ICL program. Yet if such a method were burdensome to borrowers, it could deter them from cooperating with the program.

Analysts have proposed several methods for servicing ICLs after borrowers leave school. One approach would involve the Internal Revenue Service directly. The IRS could service these loans in various ways, but one alternative would place primary responsibility with borrowers for providing current information about their income. For example, when borrowers leave school, postsecondary institutions could notify the IRS of their former students' new status, while borrowers could be made responsible for telling the IRS their new address and current income. The IRS could then calculate borrowers' monthly payments and inform them of their debt and payment amount. Borrowers could be required to make their payments either directly to the Treasury or by having their employers deduct the appropriate amount from

their paychecks and remitting it to the Treasury along with other monies due. Whenever their income changed, borrowers (or possibly employers) would be responsible for informing the IRS. The IRS could send borrowers an annual update of the amount of their remaining debt, and any small discrepancies could be reconciled annually when borrowers filed their tax forms.

A disadvantage of using the IRS to service loans is that it would increase the incentives of borrowers to reduce their cooperation with the tax system. Borrowers--especially the self-employed--would have additional reason to try to hide or possibly shift income.

An alternative way to collect repayments would be to use private collectors. If borrowers were required to provide copies of their initial pay stubs (to establish starting repayment amounts) as well as copies of their annual tax returns, private credit-reporting and bill-collection agencies could individually, or in collaboration, service income-contingent loans. The annual tax return could be used to reconcile small differences in the amount due and to establish repayment amounts for the next year. Private collectors would also be responsible for informing borrowers each year about the status of their debt.

## **NEXT STEPS IN DESIGNING AN ICL PROGRAM**

Policymakers face a complex web of choices in designing a viable, financially stable income-contingent loan program. Assessing whether a proposed ICL program would be financially stable is difficult because of the inter-dependencies among the terms of the loan and because of the uncertainty surrounding the future income profiles of borrowers. Perhaps the best way to analyze proposals for ICL programs is to simulate their effects using data on individuals to mimic the way the program would be expected to operate. The Congressional Budget Office (CBO) is now constructing such a simulation model.

A microsimulation model could help to address a variety of issues. These include what kinds of terms--loan limits, length of repayment, payback rates, and interest rates--an ICL program would need to be stable under a range of assumptions about the future income profiles of borrowers. The model could also assess how external (federal government) subsidies would allow the terms to be modified, and how much more high-income borrowers would have to repay in order to subsidize low-income borrowers to a significant degree. Altering the projected future income profiles in ways that simulate adverse selection could reveal the sensitivity of proposed ICL programs to the behavioral changes they might induce. A microsimulation model could also help to identify the types of borrowers--classified in terms of type of

postsecondary institution attended, family socioeconomic status, dependency status, years of education, occupation, sex, and race or ethnicity--that might benefit from an income-contingent loan program. As more is learned about the possible operation of an ICL program, CBO will issue additional reports.